

REPORT  
OF THE  
BOARD OF GOVERNORS  
OF THE  
UNIVERSITY OF  
ALBERTA

1931-32



THE PRESIDENT'S REPORT  
THE FINANCIAL STATEMENT

REPORT  
OF THE  
BOARD OF GOVERNORS  
OF THE  
UNIVERSITY OF  
ALBERTA



THE UNIVERSITY OF ALBERTA  
EDMONTON, ALBERTA

*The Report of the President*

TO HIS HONOUR

*The Lieutenant-Governor in Council.*

Sir:

On behalf of the Board of Governors of the University of Alberta, and in accordance with section 31, subsection 2, of an Act respecting the University of Alberta, the undersigned have the honour to transmit through the Minister of Education the Report of the University of Alberta.

The Report consists of two parts, Part I—The Report of the President on the academic work of the University for the academic year closing August 31st, 1932, and Part II—The Financial Statement for the fiscal year closing, in accordance with the regulations of the Provincial Government, on March 31st, 1932.

HORACE HARVEY,

*Chairman.*

ROBT. C. WALLACE,

*President.*

In the House  
The Committee on Education

The Committee on Education  
has the honor to acknowledge  
the receipt of the report  
of the Committee on the  
Education of the Deaf  
and Dumb, and to  
express its appreciation  
of the labors of the  
Committee in the  
discharge of its  
duties.

THOMAS HART  
JAMES HART  
JAMES HART



## PART I.

# The Report of the President

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To the Board of Governors  
of the University of Alberta.

Gentlemen :

In accordance with the requirements of the University Act, section 66, subsection 7, I beg to submit, herewith, a report of the work of the University for the academic year ending August 31st, 1932, the twenty-fourth annual report of the University, the twenty-second to your honourable body.

The academic year of the University (September 1st to August 31st) does not conform to the fiscal year (April 1st to March 31st) for which in accordance with the regulations of the Provincial Government the financial statement is presented as the second part of this Report. The academic work of the University can be treated adequately only on the basis of the academic unit—the University year from September 1st to August 31st. It has therefore been found necessary in presenting the report to deal with different twelve-month periods—one for the academic work of the University, and one for the financial report for the Government year.

### The Teaching Staff.

The University suffered a great loss in the death of Dr. Harold M. Vango, which took place December 29th, 1931, as a result of blood-poisoning contracted while performing a pathological investigation. Dr. Vango had won for himself, at a comparatively early age, a high place in the field of forensic medicine, and his advice was sought by the provincial authorities in many difficult cases of criminal investigation. He had gained the esteem and affection of his colleagues; and his death was deeply felt throughout the University. He was a man whom we could ill spare.

There has been relatively little change in the personnel of the teaching staff of the University during the year. Some part-time appointments on an honorary basis were made in the faculty of Medicine. The reduction in budget made necessary the discontinuance of some of the instructorships in the faculty of Arts and Sciences. At the end of the academic year Dr. Robert Newton resigned in order to devote his whole time to the National Research Council of Canada



as head of the biological division. Dr. Newton, as professor in charge of the department of Field Crops in the University, built up a strong research department which attracted graduate students from all parts of Canada, and added to the prestige of the University as a research centre. For the past four years he had given part of his time to the National Research Council. Dr. O. S. Aamodt succeeded Dr. Newton as head of the department.

During the year, Dr. E. Sonet, Dr. R. K. Gordon and Mr. C. A. Robb were on sabbatical leave, Dr. Sonet studying in France, Dr. Gordon in the British Isles and in France, and Mr. Robb at Johns Hopkins University. Sabbatical leave has been granted for the next academic year to Miss Jessie Montgomery to study library extension systems in England, to Dr. John Newton to do research on soils at Rothamsted in England, and to Dr. Francis Owen to carry on philological and archaeological research in North Germany.

No changes have taken place in connection with the organization of the faculties during the current year. The following are the statistics with reference to teaching staff for the year:

Full-time Staff .....	99
Part-time Staff .....	91
Library .....	7
Extension Department .....	3
Industrial Laboratory .....	2
*Department of Industrial Research .....	2

### Promotions.

The following promotions of members of the staff were made by the Board of Governors during the year:

*Chemistry*—Edward Herbert Boomer, M.Sc., Ph.D. (McGill), from assistant professor to associate professor of Chemistry.

*Civil Engineering*—Harry Randall Webb, M.Sc. (Alberta), from assistant professor to associate professor of Civil Engineering.

*Classics*—William George Hardy, M.A. (Toronto), Ph.D. (Chicago), from associate professor to professor of Classics.

*English*—Joseph Fisher, B.A., B.Litt. (Oxon), from instructor to lecturer in English.

*Field Crops*—Olaf Sverre Aamodt, M.S., Ph.D. (Minnesota), professor of Field Crops, to head of the department of Field Crops.

*Political Economy*—Henry Weldon Hewetson, B.A. (Toronto), M.A. (British Columbia), from lecturer to assistant professor.

*Psychology and Education*—Milton Ezra Lazerte, B.A. (Toronto), M.A., B.Educ. (Alberta), Ph.D. (Chicago), from associate professor to professor of Psychology and Education.

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\*Under the direction of the Research Council of Alberta two professors devote full time to research work. This work is carried on jointly by the Government of Alberta and the University.



### **Part-time Staff.**

*Obstetrics and Gynaecology*—Allan Day, M.D. (Toronto), from instructor to lecturer in Obstetrics and Gynaecology.

*Surgery*—John Keith Fife, M.D., C.M. (McGill), from lecturer to assistant professor of Clinical Surgery.

### **Leave of Absence.**

Dr. J. D. Newton, associate professor of Soils.

Dr. Francis Owen, associate professor of Modern Languages.

Miss J. F. Montgomery, Extension Librarian.

### **Resignations.**

Dr. Robert Newton, professor of Field Husbandry and head of the Department.

Dr. Samuel Gelfan, assistant professor of Physiology and Pharmacology.

Thomas A. Cutt, instructor in Classics.

Leonard A. Gilbert, instructor in English.

### **New Appointments.**

#### **FULL TIME:**

*Physiology and Pharmacology*—David Robert Climenko, B.S. (Dartmouth), M.B., Ch.B. (Edinburgh), Ph.D. (Edinburgh), assistant professor of Physiology and Pharmacology in place of Dr. Samuel Gelfan.

*Political Economy*—Einar Jensen, Ph.D. (Harvard), lecturer in Political Economy and Agricultural Economics.

*Pathology*—John Watt McGregor, B.A., M.D. (Alberta), lecturer in Pathology and Assistant Pathologist.

### **New Appointments.**

#### **PART-TIME:**

*Dental Jurisprudence*—Alexander Blair Patterson, LL.B., lecturer in Dental Jurisprudence.

*Mental Deficiency*—William John McAlister, M.D., C.M. (McGill), instructor in Mental Deficiency.

*Psychiatry* — George Alexander Davidson, M.D. (Manitoba), M.R.C.P. (London), instructor in Psychiatry.

*Obstetrics and Gynaecology*—John Ross Vant, B.A., M.D. (Manitoba), instructor in Obstetrics and Gynaecology.

*Anatomy*—William Carleton Whiteside, M.D. (Alberta), demonstrator in Anatomy.

John Gordon MacArthur, M.D. (Alberta), demonstrator in Anatomy.

*Bacteriology*—Angus Cecil McGugan, M.D. (Alberta), demonstrator in Bacteriology and Hygiene.

*Clinical Medicine*—Nathaniel James Minish, M.D. (Manitoba), demonstrator in Clinical Medicine.

Thomas Harold Field, M.D., C.M. (McGill), assistant demonstrator in Clinical Medicine.

*Ophthalmology and Oto-Laryngology*—James Gould Young, M.D., C.M. (Queen's), demonstrator in Ophthalmology and Oto-Laryngology.

*Physiology*—Gordon Nichols Ellis, B.A., M.D., C.M., (Queen's), demonstrator in Physiology.

*Radiology*—Patrick Hamilton Malcolmson, B.A. (Alberta), M.D. (Toronto), assistant demonstrator in Radiology.

### Registration by Faculties.

As distributed in the various faculties and schools the numbers are as follows:

Total registration .....	1938
1. Arts and Sciences .....	721
B.A. and B.Sc. in Arts .....	424
B.Sc. in Pharmacy .....	16
School of Commerce: B. Commerce .....	84
School of Household Economics:	
B.Sc. ....	88
B.H.Ec. ....	1
—	89
Special Students .....	14
Combined Courses:	
Arts and Agriculture .....	4
Arts and Applied Science .....	5
Arts and Dentistry .....	3
Arts and Law .....	33
Arts and Medicine .....	49
—	94
2. Applied Science .....	259
Civil, Mining, Electrical, Chemical Engineering and Architecture .....	255
Special students .....	1
Combined Courses:	
Arts and Applied Science .....	3
3. Agriculture .....	304
Agriculture .....	66
Special students .....	1
Combined Courses: Arts and Agriculture .....	2
Short Courses .....	235
4. Law .....	57
Law .....	31
Combined Courses: Arts and Law .....	26



5. Medicine .....	340
Medicine .....	166
School of Dentistry .....	24
School of Nursing :	
B.Sc. ....	17
Diploma .....	92
	— 109
Combined Course :	
Arts and Medicine .....	38
Arts and Dentistry .....	3
	— 41
6. School of Pharmacy .....	47
B.Sc. ....	16
Diploma .....	31
7. School of Education .....	24
8. Correspondence Courses .....	74
9. B.D. ....	10
10. Summer Session (1932) .....	181
11. Graduate Students .....	109
Arts and Sciences :	
M.A. ....	43
M.Sc. ....	13
B.Educ. ....	3
	— 59
Agriculture :	
M.Sc. ....	21
	— 21
Applied Science :	
M.Sc. ....	14
	— 14
Medicine :	
M.Sc. ....	2
	— 2
Special graduate students .....	13
Total.....	2126
Less duplicates in Combined Courses, Summer Session, etc. ....	171
Total.....	1955

## Registration of Students by Years.

	Men.	Women.	Total.
First Year .....	246	102	348
Second Year .....	263	155	418
Third Year .....	203	121	324
Fourth Year .....	148	86	234
Fifth Year .....	34	7	41
Sixth Year .....	24	0	24
Graduate Studies .....	92	17	109
Correspondence Students .....	40	34	74
B.D. ....	10	0	10
Agricultural Short Course .....	228	7	235
Special Students .....	6	10	16
Summer Session (1932) .....	112	69	181
Graduate School of Education .....	15	9	24
Total.....	1421	617	2038
Less duplicates in Summer Session...	48	35	83
Total.....	1373	582	1955

## Summer School and Summer Session.

As in previous years the University placed the buildings and equipment, during July and August, at the disposal of the Summer School for Teachers conducted by the Department of Education.

The Summer Session of the Faculty of Arts in which courses leading to a degree were offered was continued. The registration was as follows:

	Men.	Women.	Total.
Registration by Courses .....	114	67	181
First year courses:			
Chemistry 1 .....	17	6	23
Second year courses:			
English 2 .....	31	12	43
French 2 .....	3	10	13
History 2 .....	19	8	27
Mathematics 7 .....	17	6	23
Senior and Graduate courses:			
Chemistry 42 .....	16	10	26
Education 54 .....	12	1	13
Education 59 .....	6	4	10
English 57 .....	18	13	31
Political Economy 66 .....	13	3	16
Psychology 55 .....	7	5	12
Psychology 104 .....	5	3	8
Roman Private Life 55 .....	13	18	31



## REPORT OF THE DEAN OF THE FACULTY OF ARTS

The registration of undergraduate students pursuing courses under the jurisdiction of the Faculty of Arts and Sciences during the academic year 1931-32 reached a grand total of 721, an increase of three over that of the preceding session. This figure does not include students enrolled in the Summer Session, who, for technical reasons, are listed separately.

An analysis of the registrations under the various degrees follows:

Degree.	Year.	Men.	Women.	Total.
B.A. ....	1	22	25	47
	2	38	59	97
	3	26	40	66
	4	24	46	70
	5	4	6	10
		—114	—176	—290
B.Sc. ....	1	10	4	14
	2	39	13	52
	3	20	8	28
	4	29	7	36
	5	4	0	4
		—102	— 32	—134
B. Commerce .....	1	4	3	7
	2	28	6	34
	3	19	13	32
	4	7	4	11
		— 58	— 26	— 84
B.Sc. in Household Economics .....	1	0	11	11
	2	0	38	38
	3	0	22	22
	4	0	17	17
		— 0	— 88	— 88
B.H.Economics .....	1	0	1	1
	2	0	0	0
	3	0	0	0
		— 0	— 1	— 1
B.Sc. in Pharmacy .....	1	0	2	2
	2	5	3	8
	3	0	1	1
	4	3	2	5
		— 8	— 8	— 16
B.A. and B.Sc. in Agriculture .....	1	0	0	0
	2	2	0	2
	3	0	0	0
	4	2	0	2
		— 4	— 0	— 4

Degree.	Year.	Men.	Women.	Total.
B.A. and B.Sc. in Applied Science .....	1	0	0	0
	2	3	0	3
	3	0	0	0
	4	2	0	2
		— 5	— 0	— 5
B.A. and D.D.S. ....	1	0	0	0
	2	2	0	2
	3	0	0	0
	4	0	0	0
		— 2	— 0	— 2
B.Sc. and D.D.S. ....	1	0	0	0
	2	0	0	0
	3	1	0	1
	4	0	0	0
		— 1	— 0	— 1
B.A. and LL.B. ....	1	6	1	7
	2	6	0	6
	3	11	1	12
	4	7	1	8
		— 30	— 3	— 33
B.A. and M.D. ....	1	2	2	4
	2	11	1	12
	3	10	2	12
	4	3	0	3
		— 26	— 5	— 31
B.Sc. and M.D. ....	1	1	1	2
	2	6	0	6
	3	2	0	2
	4	6	2	8
		— 15	— 3	— 18
Special students .....		4	10	14
		— 4	— 10	— 14
Total number of undergraduates .....		369	352	721

Reviewing these detailed figures we note the following changes in the number of students proceeding towards the various degrees under the supervision of this faculty:

B.A. ....	no change
B.Sc. ....	+ 36
B.Commerce .....	+ 5
B.Sc. in Household Economics .....	+ 5
B.H.Economics .....	— 3
B.Sc. in Pharmacy .....	no change
B.A. and B.Sc. in Agriculture .....	— 3
B.A. and B.Sc. in Applied Science .....	+ 2



B.A. and D.D.S. ....	—	3
B.Sc. and D.D.S. ....	+	1
B.A. and LL.B. ....	+	1
B.A. and M.D. ....	—	7
B.Sc. and M.D. ....	+	5
Special students .....	—	36

It will be observed that the B.A. stands where it was a year ago, but the B.Sc. in Arts showed the marked increase of 36. Changes in the other categories are small, except the decrease of 36 in the number of special students who declined from 50 to 14. The explanation of this item is to be found in the large group of interested local people who registered in the course in contemporary literature offered in the late afternoons during the winter session of 1930-31 by the department of English.

Although for statistical purposes the Summer Session is not included in the figures cited above, all the summer students are registered in the faculty of Arts and numbered 142 as against 114 in 1930, and 101 in 1929. For financial reasons it was not feasible to offer any instruction in music last summer, and for the same cause we shall have to forego any formal work in this branch again this coming summer. Two concerts which were much appreciated were, however, given in the session of 1931 and it is hoped it may be possible to arrange for something of the same kind in 1932.

In this connection may I note in passing that the authority of the Senate is sought for the inclusion of music as an alternative to agriculture and art as a junior matriculation subject. This proposal does not, I regret to say, foreshadow in any way a department of music at the University, but is meant to offer some encouragement to students with musical tastes who otherwise find it exceedingly difficult to carry on with their music under the stress of a full programme of high school study.

The University buildings and campus presented an animated appearance last July and August. Upwards of 852 students and 42 instructors under the joint auspices of the Department of Education and the University, were hard at work. The grounds were looking their best and climatic conditions were delightful.

Increasing criticism has been voiced of late against the piecemeal single-package fashion in which education has been too often parcelled out. The fear has been widely expressed that diplomas and degrees have been secured merely for the completion of a loose bundle of more or less unrelated courses, and that graduates left the University without having developed any serious intellectual interest and without any understanding of the principle that it is the truth that makes us free.

While this criticism certainly is not so valid in Canada as in some other countries—our honours system having protected our best stu-

dents from scattering their energies—the time has probably come to review our position, and with this in mind the faculty of Arts and Sciences has appointed a representative committee, under the chairmanship of Professor Macdonald, to review our present situation and, if advisable, propose changes looking to the greater integration of our courses of study and, we hope, the consequent strengthening of intellectual life amongst the student body.

It is a pleasant duty once more to call attention to the continued interest of the public in the work of the University. In connection with the School of Household Economics Mr. Warren W. Prevey has generously founded a gold medal to be awarded at graduation; the Home Economics Club has given an annual scholarship of \$50.00, and Mr. D. M. Duggan, M.L.A., has offered a prize of books. The Department of Modern Languages has received from the Deutscher Club Edelweiss prizes in books of the value of \$25.00 to be awarded in the third and fourth years for proficiency in German. Through the efforts of Professor Coar, a very fine bronze bust of Goethe has been presented by a group of its friends to the University on the occasion of the commemoration of the centenary of Goethe's death.

The total number of officers giving instruction in this faculty during 1931-32 has been 22 professors, 11 associate professors, 15 assistant professors, 9 lecturers, 4 instructors, and a large number of fellows, assistants and demonstrators.

Once more it is a pleasant duty to record my appreciation of the loyal and unflagging efforts of my colleagues to demand and maintain those high standards of work which have given to the University of Alberta the reputation she jealously cherishes.

W. A. R. KERR,  
Dean.

## REPORT OF THE DEAN OF THE FACULTY OF AGRICULTURE

Our undergraduate enrolment suffered a decrease to that of the previous year, but there was a decided increase in the number going on for the M.Sc. degree. This was no doubt partly due to the fact that some felt that the slack period was a good time in which to go on with their studies. It is to be regretted that the attendance from the Schools of Agriculture seems to be growing smaller each year. No doubt the stringency of the times has a great deal to do with this. It would seem that here is a very good opportunity for the application of some scholarships since these schools have such a fine means of selection among the best of the boys available.

The following notes on the different departments are hereby submitted:

### Department of Dairying.

The Short Course in Dairying, in conjunction with the Department of Agriculture, February 29th to March 12th, 1932, was most



successful and encouraging, being attended by 15 students of good calibre. A course of lectures in Dairy Bacteriology was offered, a lecture being given each day of the Short Course at 5 p.m. These lectures were attended by sixteen local plant men as well as by those attending the regular Short Course.

Research consisting of a study of yeast and mold contamination in butter is being carried on.

#### **Department of Poultry.**

Miss Milne has continued her work at the plant at Oliver which has been kindly placed at her disposal by the Department of Agriculture. Her type of work seems to have a definite appeal in the province. She cannot begin to fill the calls upon her service.

#### **Department of Entomology.**

Investigational work reported last year is being carried on; also the work of observation in regard to some of the insect threats for the coming year. Unless the recent wet weather may have a deterrent effect there is likely to be widespread damage from cutworms and grasshoppers particularly. Mr. Strickland is acting in an advisory capacity with the Department of Agriculture in their campaign against the danger.

#### **Department of Horticulture.**

There is nothing new to report in this department. The usual work of tree propagation has been carried on and a large number of trees are being set out each year. It is to be regretted that we are not in a position to go on with more work in the field of floriculture.

#### **Department of Agricultural Engineering.**

Mr. Smith was away last summer to take graduate work at Ames and to attend the twenty-fifth anniversary of the American Society of Agricultural Engineers.

In addition to his regular work in an advisory capacity Mr. Smith has been chairman, during the past year, of the Committee on Farm Machinery, appointed by the Provincial Board of Agriculture. Some attempt is being made to bring the distribution and sale of machinery under reasonable standardization.

#### **Department of Soils.**

The regular provincial soil survey was not carried on last year, the activities of the department being particularly directed to work under the auspices of the Provincial Research Council. This involved surveys in the wooded areas and in the new districts where settlement is taking place. Attention might be called to the report of this survey just issued, "Wooded Soils and Their Management." The Soils department is carrying on a most interesting and important piece of work near the town of Breton, west of Leduc; an investigation into the use of fertilizers, particularly on wooded soils. A visit

to this area is particularly instructive. The work at Breton was expanded slightly during the past year and is attracting a good deal of attention all over Canada.

Work on fertilizers upon University property is now being undertaken, not only on the plots of the department of Soils, but on the fields of the University Animal Husbandry farm. Of course, reports upon this will be available later on.

### **Department of Field Crops.**

The department of Field Crops has carried on its work in the production of elite stock seed upon a scheme laid down by the Canadian Seed Growers' Association. This work has increased beyond our capacity to handle, the demand for Red Bobs 222 wheat being three times that of the previous year. We were able to fill only half of the applications for this variety.

Something new in the field of frost resistance in wheat may be offered as the result of the past year. It has been proven that our Red Bobs is the hardiest wheat variety, followed by Reward and Marquis and some distance farther on by Garnet. It is proposed that a zonation of the Province in regard to certain varieties of cereals shall be carried on and that a barley and oat map will be added to the wheat map already issued.

The increasing prevalence of "bunt," or "stinking smut," in wheat gives special significance to the fact that some of our new hybrids are practically immune to this disease. One of our new smooth-awned barleys has outyielded all other varieties for the past five years, its average being four bushels per acre above the next best.

Sugar beet yields at Edmonton ranged from 15 to 18 tons per acre, with percentages of sugar in the juice from 16.2 to 18.5 and coefficients of purity from about 80 to 85.

Cooperation with the Dominion Seed Branch was continued in regard to supplying foundation stocks of forage crop seeds under the federal scheme for promoting the use of these crops.

It has been found that certain weeds, such as ball mustard, are partly held in check by disease. On the other hand, the presence of weeds, such as couch grass, in grain fields may greatly increase the severity of foot rot in different seasons.

Investigations on the chemical control of weeds have revealed six chemicals which are more effective than the widely used sodium chlorate. During the year, also, the chemical constitution of certain substances in wheat plants, thought to be associated with rust resistance, has been definitely established.

### **Department of Animal Husbandry.**

In cooperation with the National Research Council, the third year's work has been completed on an investigation into the effect of environmental factors on the quality and growth of wool. Such



factors as temperature, humidity, plane of nutrition, high protein and calcium feeding, and time of shearing are included.

Swine experiments during the year have centred around various nutrition problems, including the effect of Vitamin D on calcium and phosphorous assimilation, together with the influence of rate and economy of gain when grain ground to different degrees of fineness as well as whole grain was fed.

Cattle feeding trials were in progress during the past year with a view to obtaining further data on some of the important problems relative to this important industry.

During the year some particularly good Percherons were purchased, these to take the places of Clydesdales and Belgians which had been sold, the policy of this department being, from now on, to specialize with the Percheron breed. It might be explained that the Department of Agriculture has placed at our disposal for teaching purposes the livestock at Oliver Farm, and this includes a fine lot of Clydesdale horses.

It is to be regretted that Feeders' Day had to be postponed because the roads to the farm were quite impassable. There was every indication that there would have been a large attendance at this annual event.

Quite a lot of work was done at the new farm in fencing, in building concrete walks, and somewhat extensive tree planting. It is hoped, even with limited means this year, to carry this work forward.

Professor Sinclair of this department has returned from spending a year in the University of Edinburgh and at Cambridge studying the problem of animal nutrition, being able to do this because of a scholarship given him by the Canadian Society of Technical Agriculturists.

### **Extension.**

A statement similar to that made in last year's report may well be offered in regard to our work in Edmonton.

(a) Our Short Course week this year was a decided success. This was partly due to cooperation on the part of the Live Stock Associations of the Province, and to the local seed growers. It is felt that this system of combining the work of our Short Course with the annual meetings of the different agricultural associations of the Province will be a distinct mutual benefit. We hope to carry on the same programme next year.

(b) Members of our faculty have been called upon by the Provincial Department of Agriculture for assistance in short course work, in committee work and in individual advisory capacity.

(c) The assistance given us in our Extension work through the radio equipment can scarcely be over-estimated. Members of the

faculty of Agriculture have continued their series of weekly addresses over CKUA, thereby reaching a large number of people at comparatively small cost.

(d) Our Committee on Agricultural Extension has been responsible for the publication this year of the following bulletins:

Bulletin No.

- 17. Some Power Problems on the Farm (second revised ed.).
- 19. Sheep Production in Alberta (second revised ed.).
- 21. Wooded Soils and their Management.

Circular No.

- 4. Legume Inoculation (revised edition).
- 6. Production and Preparation of Seed for Exhibition (revised edition).
- 10. Stinking Smut of Wheat in Alberta.
- 11. Marketing Alberta Feeds by the Cattle-Finishing Route.
- 12. The Origin of the Principle Underlying Elite Stock Seed Production of Cereal Crops.

Reprint from Scientific Agriculture: Relative Susceptibility of Wheat Varieties to Wireworm Damage.

Mimeo. No. 65: Pig Production Pointers.

E. A. HOWES,  
Dean.

**REPORT OF THE DEAN OF THE FACULTY OF  
APPLIED SCIENCE**

The undergraduate enrolment this year is 259. The numbers for several years backwards are 268, 235, 208, 152.

The present distribution among departments and years is:

Pre-architecture .....	3
Pre-engineering .....	27
	— 30
First year architecture .....	6
First year engineering .....	99
	—105
Second year architecture .....	1
Second year chemical .....	15
Second year civil .....	7
Second year electrical .....	24
Second year mining .....	16
	— 63
Third year architecture .....	1
Third year chemical .....	7
Third year civil .....	4
Third year electrical .....	15
Third year mining .....	5
	— 32

Fourth year architecture .....	1
Fourth year chemical .....	6
Fourth year civil .....	4
Fourth year electrical .....	8
Fourth year mining .....	4
Fourth year mining geology .....	2
	— 25
Combined courses .....	3
Special .....	1
	—
Total.....	259

It is noteworthy that the slightly decreased enrolment is due partly to the limitation of entrance to first year courses authorized last May.

A number of graduates of 1931 returned to the University for further work under the direction of the Committee on Graduate Studies.

The difficulties of meeting demands upon our staff, space and laboratory equipment are still with us, and of course cannot be overcome in a time like the present. Two short courses had to be omitted this session. The laboratory in electrical engineering was extended last summer. The likelihood of increasing demands upon this department has made it advisable to ask for authority to impose a limit upon entrance to third year electrical engineering, beginning next September. It is probable that the department of mining and metallurgy will be the next to feel the pressure.

Several proposed minor changes of curriculum will be made. These are intended to remove slight inconsistencies and to broaden the scope of the curriculum, always maintaining good standards.

The unfortunate situation due to present lack of employment is most serious when it is remembered that a great many of our students are dependent in a large measure upon their own financial resources, and that practical experience is an essential part of their training. Graduates particularly will face immediately a strenuous test of their qualities. It is to be hoped that shattered self-confidence may not result in many cases.

It is a pleasure to record my appreciation of the work and continued interest of my colleagues in the affairs of this faculty. Signal honour was attained this year by Doctor John A. Allan, professor of Geology, who was made president of the Canadian Institute of Mining and Metallurgy.

Researches and outside professional work were carried on to the usual extent by various members of the staff.

R. S. L. WILSON,  
Dean.



## REPORT OF THE DEAN OF THE FACULTY OF MEDICINE

The number of students registered under the faculty of Medicine during the past session was 309. This figure includes 24 dental, 17 students in the B.Sc. course in Nursing, and 92 students in the Diploma Course in Nursing.

### Medicine.

	Men.	Women.	Total.
First Year .....	29	2	31
Second Year .....	26	2	28
Third Year .....	38	2	40
Fourth Year .....	23	4	27
Fifth Year .....	17	1	18
Sixth Year .....	22	0	22
	155	11	166

*Note*—If we add 38 students registered in the first three years in Arts and Medicine, we have a total of 204 students proceeding to a degree in Medicine .....

38

204

### Dentistry.

First Year .....	7
Second Year .....	3
Third Year .....	5
Fourth Year .....	2
Fifth Year .....	7
	24
Arts and Dentistry .....	3
	27

*Note*—If we add 3 students registered in Arts and Dentistry, we have a total of 27 students proceeding to a degree in Dentistry.

### B.Sc. Course in Nursing.

First Year .....	9
Second Year .....	3
Third Year .....	2
Fourth Year .....	3
	17
Diploma Course in Nursing, .....	92

A very considerable increase in the number of students in the first or pre-medical year, is the unusual feature of registration in the

faculty of Medicine during the past session. There is a total increase of eight students over the previous session, due to the number of students, thirty-one, registered in the pre-medical year. This indicates, no doubt, less employment for the young.

With an increase of eighteen in the freshman year, there is, nevertheless, a falling off of attendance (10 students) in the higher years, mostly represented in the final year of twenty-two students as compared with thirty last year. There are thirteen women registered in Medicine.

### **Dentistry.**

The attendance in Dentistry is lower in total and in the second, third and fourth years.

### **Nursing, B.Sc.**

There are now seventeen students in the B.Sc. course in Nursing with a registration of nine in the first year, the highest figures for this course.

### **Clinical Teaching.**

During the session clinical instruction in the faculty has been considerably assisted through some junior additions to the teaching staff, and, very important, by a liberal supply of excellent clinical teaching matter. Our arrangements with the various city hospitals have proved adequate in this respect. The University Hospital, however, is our mainstay in this matter, and it is there that the student acquires to the fullest extent the necessary essentials of disease manifestation, clinical diagnosis, and treatment of disease. The associations amongst the staff of the University Hospital and the members of the faculty of Medicine are most satisfactory, and the students come under the influence of men who are cooperating with one another and understand the importance of proper professional relationships and the necessity for sound public service.

### **Obstetrics.**

This subject, on the contrary, is largely taught in the Misericordia Hospital, as there is no accommodation for obstetrical patients in the University Hospital. The arrangements are adequate for the time being, and the hospital authorities understanding and cooperative.

### **Dominion Medical Council Examinations.**

I am pleased to be able to say that all our graduates who wrote in the Dominion Medical Council examinations last June were successful, a very gratifying demonstration, both of the quality of the instruction given and of the capabilities of the graduates concerned.

### **Conjoint Examinations.**

A recent proposal for a conjoint examination with the Dominion Medical Council for degree and licentiate purposes, was not acceptable to the faculty in the form suggested.

### **Refresher Course.**

At the request of the Alberta Medical Association, and without expense to the University, a refresher course in Medicine of five days duration is to be held in the University Hospital from May 16th to 20th inclusive. This is the modest beginning of post-graduate clinical instruction and has created considerable interest amongst the profession within and without the province. There would appear to be no reason to doubt that, in the near future, the University of Alberta will be recognized as a centre of post-graduate medical teaching, as it has already been in the undergraduate field.

### **Research.**

Valuable research is in progress both in the pre-clinical and clinical departments, and various papers have appeared in the professional and scientific publications.

### **Obituary.**

During the year the faculty unfortunately sustained serious loss through the tragic death from septicaemia, of Dr. Harold M. Vango, associate professor of Medical Jurisprudence and assistant professor of Pathology, only recently returned from post-graduate work in Edinburgh, a young man possessing excellent qualifications. This considerably weakened the departments concerned and eliminated one whose work in forensic medicine was already becoming widely known in judicial, police and professional circles in the province.

### **Dentistry.**

A report from the Director of the School of Dentistry is as follows:

The past year has been one of varied experiences in the School of Dentistry. Due to the nature of the times, a large amount of clinical material has been from the indigent class. This, however, whilst not contributing to the coffers of the institution, has furnished much teaching material of a valuable nature.

Owing to the smaller number of students in the junior clinical year, the demand for services has far exceeded our capacity, and much has been turned away. The prospects are that this condition will continue for some time, as the registration in the next two lower classes is also smaller than usual.

I am pleased to report a continuation of the amicable relations between the School and the University Hospital. The senior students spend half a day every week in the operating room receiving valuable instruction in anaesthesia and assisting at operations in the mouth.

Since the last Convocation, one of our graduates entered upon his duties as the first dental interne at this hospital. This has proved to be a valuable opportunity for gaining experience and will contribute very materially toward professional advancement through



the contacts made with the staff and the work carried on by this excellent institution.

Our association with the Medical Faculty has been most happy, and the members of the teaching staff without exception have given very valuable help and in a very praiseworthy manner have extended every courtesy. Whatever success we have attained has been largely due to this whole-hearted co-operation, and without this generous arrangement the conducting of an efficient dental school would have been much more difficult if not impossible.

### **Appointment Elsewhere.**

Assistant Professor of Clinical Surgery, Joseph L. Petitcherc, recently accepted the chair of Clinical Surgery in Laval University, Quebec, and will leave shortly for that city. The faculty thus loses the services of an excellent teacher and capable surgeon.

### **Appointments.**

Appointments to the staff have been only in junior positions.

### **Practice.**

The calls for medical practitioners throughout the province still continue, and I am pleased to report the return, after suitable post-graduate instruction, of several of our graduates, who are locating in rural districts.

### **Graduates.**

Twenty-two final year medical students and seven final year dental students are recommended for degrees. There were no casualties.

ALLAN C. RANKIN,  
Dean.

## **REPORT OF THE DEAN OF THE FACULTY OF LAW**

During the present year there were registered in the Faculty of Law eleven students in the first year, ten students in the second year, and ten students in the third year, making a total of thirty-one. Eleven candidates are being recommended to the Senate for the degree of Bachelor of Laws. There are twenty-six students taking the work in the pre-legal years of the combined course in Arts and Law. The numbers registered in the straight law courses and in the pre-legal years of the combined course are practically the same as last year. The number of graduates in each of the last five years ranges from eight to twelve. The present registration of students in the pre-legal years and in the earliest years of the law course indicates that this average output will be maintained, but will not be exceeded during the next five years. The numbers graduating do not appear to be in excess of the requirements of the profession in the province. In the absence of serious economic retrogression, the

graduates of each year, in their present numbers, will barely suffice to balance the number of deaths, removals and retirements of practising barristers. The present tendency is for graduates to serve their required period under articles in the larger cities. On completion of their services under articles, a considerable number are starting for themselves in smaller centres.

The quality of the work done during the year by the student body in general in this faculty is satisfactory. Classes continue to be of manageable size, and they do not exceed the maximum number which is consistent with the effective working of the Case System of instruction. One gathers that the condition of affairs outside is reflected in an increased seriousness of attitude on the part of our students. The examination results indicate a serious and continued devotion to academic work.

Candidates for the degree are subjected to a serious oral examination of a general character embracing the work of the three years. This has proved to be very satisfactory. In the future it may be possible to carry this idea further and to reduce the number of examinations in the earliest years and to substitute comprehensive examinations at the end of the final year.

In the case of the combined course, it may be desirable in the future to interpolate one or more law courses in the years now devoted exclusively to courses in Arts. A course in Law of a general character in the second year of the combined course would serve as a legal aptitude test. At present students come to us with fair records in their Arts courses who fail to make a respectable showing in their legal work. Unfortunately, under the present system, this is not discovered until the student is in his or her fourth year of the combined course. A general course in Law in the second year, before the student has branched off into the Arts courses, especially designed for pre-legal students, would disclose, or at least give some indication of, the fitness or otherwise of a student who is directing his earlier university course towards legal work.

The Benchers, with the approval of the faculty, are proposing to take steps to make the year's service under articles following graduation more impressive. It is proposed to insist upon an examination in practice at the completion of the year of service and before being called to the Bar.

There have been no changes in staff during the year.

J. A. WEIR,  
Dean.

## REPORT OF THE PROVOST

### Student Discipline.

During the past few years there has been considerable discussion in the students' paper, *The Gateway*, regarding the problem of

student discipline—so much discussion, in fact, that the impression has gone abroad that something must be radically wrong so far as this aspect of the life of the University is concerned. At the spring meetings of the Senate and the Board of Governors, there was considerable discussion of this subject, as a result of which it was the unanimous desire of both bodies that some statement should be made by the University for the benefit of all concerned.

From the discussions which have been carried on by the students, two possible conclusions might suggest themselves—either that the student body is very badly behaved, or that the University authorities are demanding unreasonable standards of student conduct. First of all I should like to clear the good name of the student body of any suspicion that their conduct does not measure up reasonably to what the University authorities demand. In fact, I would like to say that in my opinion our students are, as a body, extraordinarily well behaved; and I think I can say further that this opinion is shared by those members of the University staff who have had considerable experience in this and other Universities. At the same time, I should like to state in equally positive terms that though our standards of conduct are high, and must necessarily be high, they have never been such as to interfere with the proper freedom of students *as students*; nor have they failed to commend themselves to those members of the student body who have given serious thought to the subject in the light of the best interests of the University. So far as the great majority of the students are concerned, the problem of discipline has really never been a serious one. It would, however, be a very serious matter if, at a time when what the world most needs is discipline and more discipline, the University should even give the appearance of relaxing the standards of conduct expected of the students; and this has really been the principle at stake in what appears to have become an issue between the University authorities and the students.

It has been the policy of the University to give to the students as much power of self-government as possible. The policy is in conformity with the general principle that the purpose of all discipline is ultimately self-discipline, and the reasonable expectation that self-discipline ought to be capable of realization in an institution of higher learning and in a very special degree in a University. It is also in accordance with the highest requirements of the democracy which the modern state university serves. Up till recent years this policy has worked reasonably well, but of late, misunderstandings have crept in and attitudes arisen which have seriously beclouded the whole spirit involved. The whole matter came to a head when the University authorities questioned judgments handed out by the Men's Disciplinary Committee in connection with certain offences referred to that Committee by themselves. The Committee, feeling that they were responsible to the student body by whom they were appointed,



and believing that the student body was not prepared to accept the standards which the University demanded, resigned. Subsequently the Students' Union decided, in view of the whole situation which had arisen, to relinquish their privileges of self-discipline, so far, at least, as the men are concerned. Both the Men's Disciplinary Committee and the Students' Union took the only consistent attitude possible in view of the attitude of the student body at that time, or at least, the attitude which seemed to emerge most prominently from the discussions in *The Gateway*, the Students' Council, and the Students' Union.

The whole issue has been obscured by the preponderance of legal discussions based upon certain rights which appeared to be given to the students by the Constitution of the Students' Union. There was no doubt a basis for misunderstanding here, but there was little justification for allowing difficulties involved in certain phrasings of the Constitution to shut out the recognition of certain fundamental principles which lay back of the Constitution, and apart from which no form of student discipline could possibly exist. The power of the student body to discipline its own members was a privilege granted to the students by the University in the interests of the best life of the University generally; but it would be a very strange thing if a privilege thus granted could be converted into a right which could be used against the University authorities in such a way as to render them powerless to discharge their own proper responsibilities. It would be very strange, also, if, when the University authorities handed over cases of indiscipline to the Disciplinary Committee to be dealt with they must accept without question judgments handed out by those committees. This would be equivalent to giving a students' court powers which are denied to any other court in the land. As a matter of fact, in their great anxiety to establish student self-discipline on a firm basis as one of the most significant traditions of the University, the University authorities had already exceeded the limits of their own good judgment, and for this I must myself assume the major part of the responsibility. It was very necessary that the University authorities should manifest confidence in students' disciplinary committees, if these committees are to carry with them the confidence of the students. Loyal co-operation in such a scheme is most essential on both sides, and this must always involve a reasonable attitude to give and take. This must never, however, be carried to that extreme which involves the lowering of standards, or surrendering to the students responsibilities which ultimately must belong to the University authorities, and for which the University authorities alone must be held accountable.

In these days of social unrest great demands are being made of our educational institutions, and particularly of our Universities. And rightly so. We have heard often enough—so often, indeed, that it has become one of our most well-worn platitudes—that education

should involve not only the training and disciplining of the mind, but the "nurture of character." The fact, however, that this sentiment has found expression in the thinking of every educational theorist from the time of Socrates to the present-day should not be allowed to blind us to the very fundamental truth it involves. It is only reasonable that the superior training which is afforded by the University to-day should be conducive to genuine refinement in the life of the student and to the development of the best type of leadership, and especially at a time when it is becoming more and more obvious that the world of human affairs must take cognizance not only of economic laws, but of social ideals and ethical principles. The University cannot, therefore, afford to take lightly her responsibilities in regard to this side of the training it is her function to offer. It is true the University ought to be able to assume a reasonable degree of moral as of cultural background in the young men and women who are qualified to enter her life, and I have considerable sympathy with those Universities which refuse to take responsibility for the moral conduct of students—a responsibility which they maintain ultimately rests with the parents. Most of the difficulties which are experienced in the Universities, and indeed in the schools, might, I believe, in most cases be traced back to the home; and parents who believe exaggerated reports of what goes on in the universities, and who are nervous about sending their boys and girls away from home ought to examine very carefully the foundations they themselves are laying in building up the character of their children with a view to enabling them to face confidently the outside world with all its rich possibilities and its lurking dangers. Universities should hesitate, nevertheless, to take refuge in a condition of affairs for which they are, perhaps, even more than they realize, responsible. Intellectually, morally and, in the widest sense, religiously, the University is the greatest unifying and directing force in the community today. Her influence ought to penetrate to the heart of every institution of the land; and of all institutions, the home is, as a centre of influence, the most important. The University cannot, therefore, surrender to the disintegrating forces of society, not the least of which today is indiscipline in the home, and ignorance of, and indifference to the problems of home training. There are in this sphere infinite possibilities of research, education and guidance, which can do much to enable us to face more confidently some of our most difficult and most persistent social problems, and here, no more than in any other field of social welfare, can the University afford to fail in her responsibilities or neglect her opportunities. In any case, it must be obvious that the University cannot be content to reflect standards uncritically accepted or helplessly tolerated by the community. She must uphold standards of conduct which will reflect the refining and disciplining influences of higher education and that deeper sense of public responsibility which a University

may rightly be expected to inculcate in the minds and lives of her students.

The problems which are at present causing most anxiety in the University are the very same problems which give cause for the greatest anxiety to the parents who take their responsibilities seriously. They arise before the university age, and are indeed reflected in the life of the community at large. They arise out of an insatiable desire for ephemeral pleasures which in the extreme form of the excesses involved seem to require the artificial stimulus of liquor. The tendency of young people today to introduce liquor into what should be a healthy enjoyment of their social relations is, on the face of it, deplorable. Fortunately we have had little cause to worry in regard to this problem, so far. The sentiment of the student is strongly on the side of the proper conduct of social functions. But the future needs to be safeguarded in the most careful manner. The University has always been quite willing to make reasonable provision for those social functions which, in addition to affording relaxation from the strenuous work of the class-room and creating ties of good-fellowship, have an educational value in themselves. The University does not propose, however, to permit the social life of the students to undermine or to dominate that intellectual life which it is her chief function to stimulate and to perpetuate; nor does she propose to permit social functions which cannot be controlled in accordance with University standards. So far as the liquor problem is concerned the University does not propose to tolerate the misuse of liquor in any form by the students. This statement of policy is by no means intended to reflect upon the conduct of the students in the past. It is made in order that the students may be very clear in their own minds in regard to the standard of the University on the question. It has been made necessary by the tendency of students to claim for themselves the same freedom which the law permits to all other members of the community. The University has no desire to interfere with the personal liberty of students when those liberties are rightly understood and seen in the light of the proper function of the institution of which they are members. All liberties, however, involve responsibilities which are even more significant than the liberties themselves. At any rate, it must be very obvious that liberties which are permitted by the law should not be misused by those young men and women whose training is made possible by the generosity and good-will of a public which looks confidently to them to give guidance to public opinion and leadership in public service.

While these remarks are addressed to the students in the best interests of themselves and of the University, I am deeply conscious, as a result of my long association with students, that the great majority of them are very sensitive to their own responsibilities so far as the good name of the student body is concerned, and that



they are very anxious to co-operate with the University authorities in building up a type of life that will command the respect of all within and without the University. While, therefore, the men students have formally given up the privileges in regard to self-discipline which they have hitherto enjoyed, I am confident that out of their own initiative and their own sense of responsibility will develop, in due time, influences more powerful and more effective than those embodied in written constitutions and imitations of legal procedure which tend to lose sight of, or even to kill, the true spirit involved in any scheme of student self-discipline. Personal influence and sympathetic advice and persuasion must always, in the long run, be more effective than formal charges, formal trials, and formal punishments. When this method fails, other methods must, of course, be resorted to, but even there it is quite unwise to attempt to imitate the procedure of the law-courts. In any case, the University does not propose to set up any special machinery for the apprehension and treatment of offenders. Persistent offenders usually apprehend themselves, and will be dealt with in accordance with what seems to be in the best interests of themselves and of the University. These interests will always be dictated by the very firm recognition of the fact that a University is first and last an institution of higher learning; that higher learning involves high standards of intellectual life and correspondingly high standards of conduct, and that a University is, therefore, no place for the wasting of opportunities, the money of parents, the money of the public, the time of instructors, and the time of serious students, by those students who refuse to take their responsibilities seriously. This is the policy by which the University proposes to stand, and it has the unanimous support of the administrative authorities, the Senate, and the Board of Governors. It will, we hope, commend itself to the student body as well as to the public who recognize the powerful influence within the community of that intellectual and moral discipline which it is the highest function of a University to impart.

J. M. MACEachran,

Provost.

## REPORT OF THE COMMITTEE ON GRADUATE STUDIES

The registration of students working under the supervision of the Committee on Graduate Studies has stood, during the past session at a total of 109 as against 93 in 1930-31, and as against 75 in 1929-30. This shows the rather extraordinary growth of over 17% as compared with a year ago.

Of these 109 graduates (92 men and 17 women), 21 were working in the field of agriculture; 59 in the humanities and the social and pure sciences; 14 in applied science; 2 in medicine; in addition there were 13 special graduate students.

The institutions represented in our graduate enrolment, with the number of students they contribute, are as follows:

Acadia .....	1
Alberta .....	80
British Columbia .....	2
Chicago .....	1
Concordia Seminary .....	4
Denver .....	1
Landwirtschaftliche Hochschule .....	1
Laval .....	1
London .....	1
McGill (Macdonald College) .....	1
McMaster .....	2
Manitoba .....	3
Mount Allison .....	1
Queen's .....	3
St. Francis Xavier .....	1
Saskatchewan .....	1
Toronto .....	3
Toronto (Ontario Agricultural College) .....	2

The following candidates, having satisfactorily met the requirements prescribed by the Senate, are recommended by the Committee on Graduate Studies for their respective degrees:

#### **For the Degree of Master of Arts.**

Mabel Ruth Conibear, B.A.; Alex. Beathie Currie, B.Comm.; George Vickers Haythorne, B.A.; Duncan Rudolph Innes, B.A.; Hermin Lewis King, B.A.; Beatrice Alice Ockley, B.A.; Francis Ethelbert Louis Priestley, B.A.; Richard Worthy Ryan, B.A.; Harold Eaid Tanner, B.A.

#### **For the Degree of Master of Science.**

George Herbert Argue, B.Sc.; William Earl Bowser, B.Sc.; Fred Rees Davies, B.Sc.; Robert Grenville Dunlop, B.Sc.; Anita Glenlevit Gordon, B.Sc.; Reginald Clarence MacKenzie Hamilton, B.Sc., M.D.; Vladimir Ignatieff, B.Sc.; Thomas Kilduff, B.Sc.; Helmut Kohnke, B.Sc.; Frank John Leger, B.Sc.; Stanley Chaplin Lynn, B.Sc.; Harold Charles Moss, B.Sc.; Shirley Guy Preston, B.S.A.; Eric George Sharvelle, B.S.A.

W. A. R. KERR,  
Chairman, Committee on Graduate Studies.

### **REPORT OF THE FRESHMAN COMMITTEE**

On behalf of the Freshman Committee I have the honour to submit various summaries giving the examination results in the various faculties.

Throughout the year the work of the committee has been carried on in the usual way. Every attempt to assist the weaker students has been made; a great deal of attention has been given to the more promising students.

The new organization of the committee has proved satisfactory. The committee has received, as in the past, the best co-operation from its colleagues and from the students. The work of the advisers has continued to be of distinct value; in every case they have appreciated being relieved of the disciplinary work of the committee.

During the season the committee has discussed with the President the advisability of enlarging the scope of the series of lectures given to new students. In the past the President has given three or four lectures each session on the history of university education, the place of universities in the modern world, the relation of this university to the province, and the opportunities and responsibilities of the members of the university community. During the coming session the scope of these lectures will be enlarged and the President will give a series of lectures on "The World of Knowledge," discussing the great movements of thought and seeking to arouse at the very beginning a real interest in intellectual affairs.

E. W. SHELDON,

Chairman, Freshman Committee.

### LIBRARY REPORT

The work of the library has been carried on for the year under the somewhat congested conditions which have existed now for some time. The pressure on the library facilities, particularly as to space, has been fully maintained, and is likely to be a permanent condition until building becomes possible. The special mark of the year, so far as library demand was concerned, was the very marked increase in the use of the library during the Summer School session, during which the library staff was kept under steady pressure. The reason probably is that existing conditions have stimulated the desire for better qualification in teachers. The peak load on many days during the Summer School was as great as that during the busier part of the winter term.

During the winter session, the books of the School of Education were placed in St. Joseph's College, where a reading-room was provided. The staff of the school report that this arrangement was very successful, and that more reading was done by the students than could have been done without this separate provision for them. For the Summer Session the books are brought back to the main library.

The pressure on our shelf space requires that we should use storage space for the less used books and journal files, and this policy is being resorted to.



The accessions to the library have been maintained on the level of the last few years, the accession number being at this date 45,085, an increase of 2,460 volumes during the year. The capital vote received for the last few years for the purchase of journal files has been specially valuable, and has allowed the addition this year of further important files to our holdings.

The Carnegie Corporation has set aside a sum of some \$150,000 for strengthening the libraries of Canadian Arts Colleges, and it is expected that we shall be visited by a representative of the Corporation in the near future in connection with this appropriation. The intention of the Carnegie Corporation is that moneys allotted to libraries from this fund should be devoted to increasing the usefulness of the libraries to undergraduate students.

There has been no change in the permanent staff of the library during the year. This winter Miss Hamilton, assistant in charge of the Medical Library, has been taking her professional training in the Library School of the University of Washington, and will return to her position here in a few weeks. Her place for the year has been held by Miss Pharis. The librarian wishes to record his appreciation of the unfailing loyalty of the members of the library staff, and thinks it safe to say that the teaching staff and students appreciate the willing service rendered.

It may perhaps properly be pointed out that attendance at a library school for a full term is required of every one joining the library staff either before appointment, or as soon thereafter as is convenient to liberate them for this purpose. This added professional training is costly, requiring, as in Miss Hamilton's case, eight months of time, and the expenditure of a sum approaching one thousand dollars. It is felt that this additional training should be distinctly recognized in the salary scale.

During the course of last summer the Librarian visited many of the larger libraries in the eastern States and in eastern Canada, and studied the latest developments in buildings and administration. Full information was collected for our own guidance in future developments, and continued study is being given to the decisions that must be reached when building becomes possible.

It is pleasant to report that during the year the relations between the staff and students of the University and the staff of the Library have been all that could be desired, and that the library staff has tried to meet the calls on it as fully and as fairly as possible.

A number of donations were received, all of which were duly acknowledged: one, which may be noted here, consisted of a donation of some two hundred volumes of very useful books, given by Mrs. A. E. Gerrans, of Oxford, from the library of the late Professor Gerrans.

D. E. CAMERON,  
Librarian.

## EXTENSION DEPARTMENT

The following is the summary of the major activities of the Extension Department for the year under review:

### Extension Lectures and Moving Picture Programmes.

Number of lectures and moving picture programmes	193	
Aggregate attendance .....		20,853
Radio lectures .....	477	
	<hr/>	
	670	

### Library and Debating Service.

Travelling library circulation .....	24,269	
Open shelf circulation .....	13,022	
	<hr/>	37,291
Package libraries for debaters .....	921	
Pamphlets (not debates) .....	3,229	
	<hr/>	4,150
Plays for amateurs supplied communities numbering	382	
	<hr/>	4,532
		<hr/>
		41,823

### Visual Instruction.

Sets of lantern slides circulated .....	1,718	
Number of times used .....	2,731	
Aggregate attendance at lantern slide lectures .....		190,721
Sets of moving picture films circulated .....	291	
Number of times used .....	400	
Aggregate attendance at moving picture programmes		48,101
	<hr/>	
		238,822

### Gramophone Records.

Number of records sent out .....	45
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### Conference and Exhibits.

Conference:		
University Week for Farm Young People:		
Delegates .....	133	
Leaders .....	9	
	<hr/>	142
Exhibits: Edmonton Exhibition, Edmonton Industrial Exhibition, U.F.A. Conference.		

### Instruction in First Aid and Home Nursing.

No record, as books transferred to Mr. Pardee in December, 1931.

## Publications.

### Press Bulletins:

Number of bulletins issued .....	4
Average circulation .....	5,000
Aggregate circulation .....	20,000

### Agricultural Publications:

Number sent out during the year .....	14,298
Individual requests received .....	2,265
Total number sent out since Jan. 1, 1923.....	112,588
Bulletins distributed prior to Jan. 1, 1923.....	25,000

Recorded number of individuals reached by the services of the department during the year.....	308,905
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## Recapitulation.

Total aggregate attendance at lecture and moving picture exhibitions, lantern slide lectures, and Farm Young People's Week .....	259,817
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Total circulation of books, package libraries and plays.....	41,823
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Total circulation Press Bulletins and Agricultural Bulletins	34,298
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NOTE.—In the totals there is not necessarily meant separate individuals, as the same people take advantage of more than one service in some cases.

## SCHOLARSHIPS, MEDALS, PRIZES AND GIFTS

### Scholarships.

The University of Alberta offers three scholarships in place of the three scholarships offered to the Province of Alberta at large by the Robert Tegler Trust which have been withdrawn. These scholarships are to be known as the University of Alberta Scholarships and are not to be available to students holding the Robert Tegler Trust Scholarship or the P. Burns award.

The Calgary Dental Society has again offered their annual scholarship of \$50 to be awarded to the student having the highest general standing in all subjects during the second, third and fourth years of Dentistry at the University, only after the student has registered in the fifth year of Dentistry at the University of Alberta.

Mr. and Mrs. John M. Imrie have established a scholarship to be known as the Elizabeth Imrie Scholarship, amounting to \$750 per annum, for a minimum of two years, to be awarded to the student who will most suitably take advantage of the Zimmermann School of International Affairs at Geneva and the sessions of the League of Nations.

The Home Economics Club of Edmonton have given a scholarship of \$50 to be awarded to the student in Household Economics obtaining the highest standing for the third year, provided that the student passes all courses and obtains an average of not less than 75% on



the year's work. The award will be contingent upon the student's proceeding with the work of the fourth year.

The Edmonton B'nai B'rith has established an annual scholarship of \$50 for a period of five years to be awarded to the student in honours in the third year of the Arts and Sciences course; the award to be made on the basis of the highest standing in the work of that year, there being taken into consideration as well the previous University record.

The Edmonton Section of the Council of Jewish Women offers annually a scholarship of the value of \$50 to the student who takes the highest standing in the work of the second year of the Faculty of Arts and Sciences, provided that an average of not less than 75% be obtained on the work of the year. Further, the award will be contingent on the student's proceeding with the work of the third year and will be paid only after the student has been in actual attendance in the third year of his, or her, course.

### **Medals.**

Mr. Warren W. Prevey has donated a gold medal to be awarded to the graduating student making the highest standing in the work of the last three years of the course leading to the degree of B.Sc. in Household Economics.

### **Prizes.**

Two prizes to the value of \$100 and \$50 respectively have been donated by the B'nai B'rith Hillel Foundation to be awarded to the student in undergraduate or combined courses writing the best essay on the subject, "The Jewish Contribution to Civilization."

Mr. D. M. Duggan, of Edmonton, has offered a prize of books to the student making the highest standing in the work of the second year in the B.Sc. course in Household Economics, provided such student's record is satisfactory to the School of Household Economics.

The Deutscher Club Edelweiss has offered two prizes annually to the value of \$25 in books for the encouragement of the study of the German language and literature on the following terms:

1. \$10 in books to the student taking the highest standing in German 47.
2. \$15 in books to the student taking the highest standing in German 54.

The Alberta Society of Petroleum Geologists have established a Dowling Award at this University consisting of two volumes of "Stratigraphy of Plains of Alberta," to be awarded on the following basis:

One volume shall be presented each year, for ten successive years to the graduating student who is a candidate for the Bachelor's Degree and who in the opinion of the department of Geology has made the most progress in the study of Stratigraphic Geology.

The first award shall be made at the 1932 Convocation.

## Gifts.

The University of Alberta has benefited from the generosity of the Carnegie Corporation of New York in that it is in receipt of a gift of \$30,000, payable in three annual instalments of \$10,000 each, to be used to stimulate the appreciation of the fine arts, particularly the drama.

The Board of Trustees of the Carnegie Corporation have made an appropriation from their library fund to the library of the University of Alberta of \$15,000, payable \$5,000 annually for three years, beginning 1932-33, to be used for the purchase of books.

The Class of 1932 on its graduation presented to the University a drinking fountain which has been installed in the rotunda of the Arts Building near the library.

Dr. W. A. R. Kerr, Dean of the Faculty of Arts and Sciences, has donated a silver trophy cup to the University in connection with the five-mile cross-country run.

Mr. Maurice Polet, Belgian Consul, Edmonton, has presented a set of slides on the Belgian Congo for use in the Department of Extension.

The Beaver House Chapter, I.O.D.E., have established a student loan fund to the extent of \$100 to be carried out under the same terms and arrangements as the Women's University Club fund.

The Department of Field Crops is in receipt of a gift of \$250 from the Searle Grain Company for field work on breeding cereals for resistance to drought and also a gift of \$100 from the Canadian Malting Company for research work on barley.

### *To the Library.*

A gift of 200 volumes has been received from Mrs. A. E. Gerrans, of Oxford, England, in memory of her husband, H. T. Gerrans, Esq., Fellow of Worcester College, Oxford.

The College of Physicians and Surgeons of Alberta have presented to the University the sum of \$500 to be expended for medical books.

From the Kentucky Geological Survey all available publications, and from Mr. Kerr, of Messrs. Tighe and Kerr, fifty volumes of law books.

Books from the following: Mr. J. J. Duggan, Miss Adela Roy, The Ministry of Justice, The Austrian Consulate, The Japanese Consulate, Dr. Boomer, Dr. Gelfan, Dr. R. A. Millikan, Dr. J. J. Ower, Dr. J. K. Dean, University of Calcutta, Polish Consulate, Dr. E. K. Broadus, Welsh Plant-Breeding Station, Professor G. M. Smith, Dean E. A. Howes, Miss Clare Benedict, Dr. R. C. Wallace, Professor M. H. Long, Dr. J. A. Allan, University of Witwatersrand, Mr. J. Cubbin, Dr. L. F. Bishop, Messrs. Cadbury, The Wheat Surplus Board, The Mental Hygiene Committee, The Vancouver Medical Association, Dr.

Shaner, City of Geneva, Japanese Consulate, Vancouver, Oscar Newfang, Dr. Evan Greene, Western Theological Seminary, Dr. A. W. Downs, Mr. E. Mueller, The Rhodes Trustees, Le Comité France-Amerique, Dr. J. S. Macleod, Mount Allison University.

*To the Department of Geology.*

Collection of thirty-two minerals and ores of fine quality including large specimen of salt crystals from Great Slave Lake; pyrite and tetrahedrite from Bingham; barite, enargite, cerargyrite, jarosite, galena and limonite from Tintic; rhodochrosite, spalerite, etc., from Park City; from Mr. Harold Wright, student of the University of Alberta, University of Utah, Salt Lake City, Utah.

Eight collections of 176 specimens of fossils from Cambrian, Ordovician, Silurian, Carboniferous, Permian, Jurassic, Cretaceous and Eocene Periods, from Mr. Harold Wright, University of Utah, Salt Lake City, Utah.

Collection of 27 minerals and 33 rocks from Great Slave Lake, N.W.T., from Mr. O. R. Wray, student in Mining Geology at the University of Alberta.

Collection of 22 mineralized geodes from Dr. W. A. Kelly (graduate of the University of Alberta), Michigan State College, Lansing, Mich.

Stone hammer and 19 arrow heads from Dr. W. A. Kelly, Michigan State College, Lansing, Mich.

Bentonite from Copper Mountain, B.C., from Mr. E. S. Semmens, C.P.R. Industrial Agent, Calgary.

Gold in quartz, McIntyre mine, Ontario, from A. Stevenson, Edmonton.

Proderite specimen from Dr. F. W. Atack, Kingston, Ont.

Specimen folded coal from Mr. Moses Johnston, District Inspector of Mines, Blairmore, Alberta.

Fossilized reptile bones from Mr. Moses Johnston.

Pitchblend ore containing 156 milligrams radium to the ton, Great Bear Lake, from Mr. J. A. Kelso, Industrial Laboratories, University of Alberta.

Native silver in high grade ore, Great Bear Lake, from Mr. J. A. Kelso.

Flint arrow head from Mr. J. A. Kelso.

Indian implements from Rev. T. E. Jeffrey, Ponoka.

The *Department of Chemistry* is in receipt of the following donations for the chemical museum:

Specimens of colloidal graphite compounds from the Acheson Oil Dag Company of New York.

A collection of abrasive and refractory materials from the Carborundum Company of Niagara Falls, N.Y.



A splendid collection of raw materials and silicate samples from the Philadelphia Quartz Company.

Over a hundred specimens of coal tar products from the Metropolitan Gas Company of London, England.

A collection of samples of primary products prepared in Canada from the coal tar industry from the Dominion Tar and Chemical Company, Montreal, Que.

A splendid collection of lacquers and other chemicals manufactured in Canada by this company from the Cosmos Chemical Company, Port Hope, Ont.

A collection of refractory exhibits from the Norton Company, Worcester, Mass.

An exhibit of porcelain products used in the chemical industry, mounted in a small case from the Coors Porcelain Company, Golden, Colorado.

*Gifts from the Carnegie Corporation of New York.*

After a full investigation of the work of the Extension Department of the University, and the possibilities of creating a wider interest in the cultivation of drama, art and music in the rural districts of Alberta under the direction of the Extension Department, the Carnegie Corporation of New York decided to give a grant of \$30,000 to aid in this work over a period of three years. The first instalment of \$10,000 has already been paid, and the co-operation of the rural districts has been indicated to a degree which may embarrass the resources of the department. The work is organized through committees in Edmonton and Calgary respectively, and with the co-operation of local committees in rural centres, the dramatic and musical festival organizations of the province, and the National Art Gallery in Ottawa and the Museum of Arts in Edmonton. The quest of beauty is a fundamental instinct, and the time proved to be ripe, when material prosperity was on the wane, to minister to the sense of beauty among the people who are so situated that facilities are less readily available than in the cities. The experiments will be watched with interest not only in Alberta, but throughout Canada.

The Corporation made funds available to the universities and colleges of Canada to assist in the purchase of books for undergraduate work in Arts and Sciences. A Canadian committee was set up, and the resources and needs of the universities were canvassed. The decision of the committee has been to give a grant of \$15,000 to the library of this University over a period of three years, and the first instalment has now been paid. This will materially assist in adding to the resources of the library which has scarcely kept pace with the growth of the University in recent years. The physical accommodation is lamentably inadequate, but room must and will be found for the books which are needed.

From the residue of a grant which was made by the Corporation to the Bureau of the Universities of the British Empire grants in aid are offered to members of staffs of overseas universities who desire to study for a year in Great Britain. Three grants are given each year, and in the first year of the award one of the grants was given to Dr. J. Newton of our staff. Dr. Newton is carrying on research in soils at Rothamsted, England. The other two grants were given to professors in Australia and New Zealand respectively.

A sum of money has been set aside by the Corporation, under the administration of the Association for Adult Education, to enable Canadian students or teachers to investigate the folk school system of Denmark and other Scandinavian countries. Two awards were made last year—one to the Secretary of the United Farmers of Ontario, and the other to a student in Agriculture of the University of Alberta, Mr. A. Sinclair, who had previously had experience as a teacher in rural districts in this province.

### STUDENTS STUDYING ABROAD

A number of students of the University of Alberta are pursuing further study in other universities, some as the result of scholarships awarded within the province and others having obtained scholarships or fellowships from the universities where they are now pursuing a course of study. The following list of those studying and the auspices under which they are studying is an indication of the growth of this tendency on the part of honour students.

Under the Rhodes Scholarship system Hugh W. Morrison, B.A., and Kenneth W. Conibear, B.A., are continuing their studies at Oxford, and Edward McCourt, B.A., who was appointed Rhodes Scholar this year, has just begun a three years' course at Oxford. George F. G. Stanley, B.A., after taking the Honour School of Modern History at Oxford, did one year of graduate study and is now taking an additional year on a Beit Scholarship in Colonial History awarded at Oxford.

Under the grant from the Imperial Order of the Daughters of the Empire, Kenneth F. Argue, B.A., is pursuing a course of study at Oxford.

The French Government Bursary for a year's study in France was awarded to Bernal Ernest Walker, B.A.

Alan S. Galbraith is proceeding towards his Ph.D. degree in Mathematics at Harvard University, at which institution he has a teaching fellowship.

At the University of Toronto, V. Ignatieff, M.Sc., is pursuing a post-graduate course and is a demonstrator in the department of Biochemistry.

At McGill University: T. D. Stanley, B.A., B.Sc.; G. H. Argue, B.Sc.; H. E. Morris, M.Sc.; H. E. Rawlinson, M.D.; and R. E. Richard-

son, M.Sc., are studying towards their Ph.D. degrees, the last named having obtained a fellowship.

J. R. Hopkins, M.Sc., is completing his Ph.D. degree work at the Rothamsted Experiment Station and the University of London.

Frank Peto, M.Sc., who has been doing graduate work at the University of Wales, is about to receive his Ph.D. degree.

At the University of California, A. G. McCalla, M.Sc., and H. G. Reiber, M.Sc., are doing graduate work, as is also J. I. Sheppy, B.A.

A. W. Saddington, M.Sc., is working towards his Ph.D. degree at the University of Illinois, where he has a teaching fellowship.

At Johns Hopkins University, Miss Alma May Harris, B.A., is doing post-graduate work in Classics, having obtained a foreign scholarship at that institution, and Miss Elizabeth McKenzie, B.Sc., is taking graduate work in Household Economics.

At the University of Minnesota, E. R. Tinkham, B.Sc., B. Keen, B.Sc., O. R. Young, M.Sc., J. C. Hide, B.Sc., and E. Sharvelle, B.Sc., are pursuing courses towards higher degrees, the last three mentioned having obtained graduate assistantships.

J. P. MacKenzie, B.Sc., is pursuing further study at the Northwestern University where he has a teaching fellowship.

H. Kohnke, M.Sc., is doing post-graduate work at the University of Ohio, having obtained a scholarship at that institution.

At the University of Wisconsin, J. B. Linneboe, B.Sc., has obtained a scholarship to enable him to do post-graduate work; W. V. Drake, M.Sc., is a teaching fellow and proceeding to his Ph.D. degree, and A.E. Clark, M.Sc., has just completed his Ph.D. there.

## THE GRADUATES OF THE UNIVERSITY

The number of the graduates of the University has now reached a goodly total of 2,166. It has been found to be difficult to keep in touch with all of them, as many do not give their addresses to the University. The Secretary of the Alumni Association, Mr. G. B. Taylor, who is also Assistant Registrar of the University, maintains as complete a file of the records of the graduates as is possible under the circumstances. From the file the following statistics have been abstracted as to the distribution of our graduates at the close of the academic year under review:

Resident in Alberta .....	1,366
Resident in the provinces of Canada .....	359
Resident in the United States:	
Temporarily .....	45
Permanently .....	123
	— 168
Resident outside North America .....	37
Deceased .....	45
Addresses not known .....	191
	—
	2,166



Statistics are not available of the number of graduates from other universities now resident in Alberta, but it is more than probable than other Canadian universities—particularly Toronto and McGill—have as yet made a much greater contribution to Alberta's professional life than has Alberta as yet to the other provinces, notwithstanding the apparently fairly large number of Alberta graduates resident in the other provinces. This give-and-take as between the universities of Canada will in the nature of things always go on and is in the best interests of Canadian life. A university will serve its own province primarily, and will do so to an increasing extent. The opportunities for the graduate cannot however be limited by provincial boundaries; and some graduates of this University will find their lifework elsewhere, just as some graduates of other universities in Alberta.

It is a striking fact that only slightly over five per cent. of the graduates—123 out of 2,166—are permanently settled in the United States. The others now in the United States are there for purposes of graduate study or are otherwise temporarily in residence. The fact is the more noteworthy because many of the farmers in this province have migrated from the United States and have ties of kinship there which might be sufficiently strong to bind their sons and daughters who graduate here to the old home land. Until recently, as well, there were much greater opportunities in engineering and in other practical sciences. The facts given above will serve to remove apprehensions which are sometimes entertained that an unduly large number of men and women who have been educated in our public institutions later give their services to the republic of the United States. The fact must not be lost sight of as well that no greater service in international understanding can be performed than that some university graduates should serve as interpreters of the spirit and the institutions of Canada, and that a similar service be performed in Canada by some of the graduates of the universities of the United States.

Every effort is being made to obtain information about the 191 graduates whose addresses are unknown. It is the wish of the University to have no name missing from the graduate files. The function of the University is not ended when the graduate signs the register on receiving the parchment. If a university is worth while—and we believe that our University is worth while—it may serve as an inspiration and as a challenge to graduates in their reading and their thinking as long as they remain students. If the University has interpreted itself aright, they will remain students throughout their lives.

## **PUBLICATIONS OF THE UNIVERSITY STAFF**

The following is the list of the publications of members of the staff for the year. This does not represent the complete list of the research work of the University. Several papers were issued by senior

research students under the direction and guidance of members of the staff, which are not listed below. There are listed only the books or papers with which the name of members of the staff are associated.

The following is a list of the publications for the year:

#### **President Wallace.**

"A liberal education in a modern world" (The Burwash Memorial Lectures), Macmillan Company of Canada, 1932.

"Research today," Scientific Agriculture, July, 1932, v. 12, pp. 679-682.

#### **Department of Accounting.**

By F. G. Winspear: A manual of laboratory assignments for Accounting 1, University of Alberta Press.

#### **Department of Agricultural Engineering.**

By Professor J. Macgregor Smith: "Field crops handbook," published by the Department of Agriculture, Province of Alberta, The section on Farm Machinery, 1932.

"Soil drifting and its control," Circular No. 13, University of Alberta, College of Agriculture. Section No. 2, "The influence of machinery on soil drifting," April, 1932.

"The Header Barge method of harvesting," Circular No. 14, University of Alberta, College of Agriculture, joint author with Donald Cameron, B.Sc.

#### **Department of Anatomy.**

By Dr. R. F. Shaner: "Teach the students to think," Canadian Forum, April, 1932, p. 264.

"The development of the nuclei and tracts of the midbrain," Journal of Comparative Neurology, vol. 55, pp. 493-512.

#### **Department of Animal Husbandry.**

By Professor J. P. Sackville: "Sheep production in Alberta," Bulletin No. 19, University of Alberta, College of Agriculture, second edition.

#### **Department of Bacteriology and Hygiene.**

By Dean A. C. Rankin: "B.C.G. vaccine," Canadian Public Health Journal, September, 1931.

"Vaccination des Bovides par le B.C.G.," bref exposé de quelques faits établis par le comité de recherches sur la tuberculose de l'état d'Alberta, Canada.

Institute Pasteur, Vaccination preventive de la tuberculose rapports et documents—Provenant des divers pays (la France exceptée) transmis à l'Institute Pasteur en 1932.

By Dean A. C. Rankin, Dr. J. J. Ower, Dr. R. M. Shaw, Professor P. R. Talbot, and the late Dr. H. M. Vango: "Studies on B.C.G. vaccine—II, non-virulence and resistance in new-born calves," Canadian Journal of Research, 6, pp. 177-191, 1932.

By Dr. R. M. Shaw: "Tularaemia: with report of a case," Canadian Medical Journal, 1932, vol. 26, No. 3, p. 305.

#### **Department of Biochemistry.**

By Dr. M. M. Cantor and Dr. J. W. Scott: "Substitution therapy in Addison's disease," Canadian Medical Association Journal, 1932, No. 26, pp. 330-333.

#### **Department of Chemistry.**

By Dr. O. J. Walker: "Distribution of iodine in Alberta in relation to the prevalence of goitre. I. Iodine in the water supplies," Canadian Journal of Research, No. 7, pp. 137-48, 1932.

By Dr. R. B. Sandin, W. V. Drake and F. Leger: 2, 6-Diiodo-p-nitroaniline. Organic syntheses, vol. XII, John Wiley & Sons.

By Dr. E. H. Boomer and H. E. Morris: "Reactions of ethyl alcohol on nickel chromium catalysts," Canadian Journal of Research, 6, pp. 471-84, 1932.

#### **Department of Classics.**

By Dr. W. H. Alexander: "The amiable tyranny of Peisistratus, or the future of Classical studies," pp. 20, University of Alberta Press, September, 1931.

"The city of Umbrian Griffin," University of Toronto Quarterly, January, 1932, pp. 207-15.

"Classical scholarship," Canadian Forum, April, 1932, p. 268.

#### **Department of Dairying.**

By Dr. H. R. Thornton: "Tests for quality in milk," Canadian Public Health Journal, No. 23, January, 1932, pp. 36-40.

#### **Department of English.**

By Dr. E. K. Broadus: "The story of English literature," Macmillan Company, N.Y.

By Dr. R. K. Gordon: "Scott and the comédie humaine" in "Sir Walter Scott today" (Constable), edited by H. J. C. Grierson for the Edinburgh Centenary Committee.

#### **Department of Entomology.**

By Professor E. H. Strickland: "Recommendations for grasshopper control in Alberta," 4 p., 1932, bulletin prepared at the request of the Department of Agriculture.

"Bedbugs and their control," Extension Leaflet No. 5.

"Application of poisoned dusts," Extension Leaflet No. 6.

"Contact insecticides," Extension Leaflet No. 6.



### Department of Field Crops.

By Dr. Robert Newton, W. R. Brown and J. A. Anderson: "Chemical changes in nitrogen fractions of plant juice on exposure to frost," Canadian Journal of Research, 5(3), pp. 327-32, 1931.

By Dr. Robert Newton and W. R. Brown: "Catalase activity of wheat leaf juice in relation to frost resistance," Canadian Journal of Research, 5(3), pp. 333-36, 1931.

By Dr. Robert Newton and J. A. Anderson: "Respiration of winter wheat plants at low temperatures," Canadian Journal of Research, 5(3), pp. 337-54, 1931.

By Dr. O. S. Aamodt: "Varietal trials, physiologic specialization and breeding spring wheats for resistance to *Tilletia tritici* and *T. levis*," Canadian Journal of Research, 5, pp. 501-28, 1931.

"The origin of the principle underlying elite seed production of cereal crops," University of Alberta, Circular No. 12, December, 1931.

By Dr. O. S. Aamodt and J. M. Manson: "The production and preparation of seed for exhibition purposes," University of Alberta, Circular No. 6 (revised), September, 1931.

By Dr. J. R. Fryer: "Cultural methods for growing brome grass and western rye grass in Alberta," University of Alberta, Extension Leaflet No. 1, April, 1932.

"Cultural methods for growing timothy in Alberta," University of Alberta, Extension Leaflet No. 2, April, 1932.

"Cultural methods for growing alsike clover in Alberta," University of Alberta Extension Leaflet No. 3, April, 1932.

"Cultural methods for growing red clover in Alberta," University of Alberta, Extension Leaflet No. 4, May, 1932.

By Dr. A. W. Henry: "Occurrence and sporulation of *Helminthosporium sativum*, P.K.B. in the soil," Canadian Journal of Research, 5, pp. 407-13, 1931.

"Influence of soil temperature and soil sterilization on the reaction of wheat seedlings to *Ophiobolus graminis* Sacc.," Canadian Journal of Research, No. 7, pp. 198-203, 1932.

### Department of Geology.

By Dr. J. A. Allan: Report of Progress for 1931, Geological Survey Division. Included in Report No. 27, Twelfth Annual Report, Research Council of Alberta, 1932, pp. 19-33.

"Donaldson Bogart Dowling": biographical sketch to D. B. Dowling Memorial symposium, "Stratigraphy of plains of southern Alberta," Bulletin American Association of Petroleum Geologists, vol. 15, No. 10, October, 1931.

By Dr. P. S. Warren: "A lower Jurassic fauna from Fernie, B.C.," Transactions of the Royal Society of Canada, vol. 25, section IV, 1931, p. 105.

"Invertebrate Palaeontology of southern plains of Alberta," Bulletin American Association of Petroleum Geologists, vol. 15, No. 10, October, 1931, p. 1283.

"A new Pelecypod fauna from Fernie formation, Alberta," Transactions of the Royal Society of Canada, vol. 36, section IV, 1932, pp. 1-36.

By Dr. R. L. Rutherford: "A criticism of: 'A structure section across the Canadian Rockies,'" by Raymond and Willard, Journal of Geology, vol. 39, 1932, p. 597.

"An occurrence of Pickeringite in Alberta," American Mineralogist, vol. 17, 1932, p. 401.

"Certain sections in the Report of Progress for 1931 of the Geological Survey Division, Research Council of Alberta, 1932.

#### **Faculty of Law.**

By Dean J. A. Weir: "Davies v. Mann and contributory negligence statutes," Canadian Bar Review, vol. 9, pp. 470-86.

"Rights of third persons under contracts," Canadian Bar Review, vol. 10, pp. 381-400.

By M. M. MacIntyre: "Formalities in the execution of wills," Canadian Bar Review, vol. 10, pp. 253-64.

#### **Department of Mathematics.**

By Dr. J. W. Campbell: "On the determination of stringing tensions for transmission lines and cables," Engineering Journal, September, 1931.

"The measurement called time," Journal of the Royal Astronomical Society of Canada, October, 1931.

#### **Department of Medicine.**

By Dr. Egerton L. Pope: "Scoliopathesis," Canadian Medical Association Journal, January, 1932, vol. XXVI, No. 1 P, 1932.

#### **Department of Modern Languages.**

By Dr. Edouard Sonet: "Essentials of French Grammar," Copp, Clark Company, Limited, Toronto, 1931.

By Dr. John F. Coar: "Goethe's message to the twentieth century," University of Alberta Press.

By Dr. Henri de Savoye: "L'Avenir;" "La conversation française pour les étudiants des écoles supérieures," L'Union Printing, Edmonton.

#### **Department of Obstetrics and Gynaecology.**

By Dr. L. C. Conn: "Some clinical aspects of disproportion in obstetrics," Canadian Medical Association Journal, vol. XXV, pp. 419-21, 1931.

"Leucorrhoea," Canadian Medical Association Journal, vol. XXVI, pp. 48-49, 1932.

### **Department of Physics.**

By Dr. R. J. Lang: "Second spark spectrum of antimony and a note on the first spark spectrum of tin," *Physics Review*, vol. 35, pp. 445-51.

"Note on spectrum of Sb. II," *Letter to Physical Review*, vol. 39, p. 538.

By L. H. Nicholls: "The burning of settlers' slash and meteorological conditions in the province of Quebec during 1931," published by the Quebec Forest Industries Association, Ltd., 38 p., 5 plates and 15 tables.

"Climate of Alberta," chapter IV in "The Canadian Climate," by C. E. Koeppe, McKnight and McKnight, Bloomington, Ill.

### **Department of Physiology.**

By Dr. A. W. Downs and Dr. N. B. Eddy: "The influence of barbital upon cocaine poisoning in the rat," *Journal of Pharmacology and Experimental Therapeutics*, 1932, XIV, pp. 383-387.

By Dr. S. Gelfan and Dr. G. H. Bishop: "Action potentials from single muscle fibres," *The American Journal of Physiology*, 1932, ci., pp. 678-85.

By Dr. D. R. Climenko: "Studies on the Arneth Count, XIX. The organ distribution of the neutrophilic polymorphs with reference to their passage through mucous membranes," *Quarterly Journal of Experimental Physiology*, 1931, XXI, pp. 289-98.

"Studies on the Arneth Count, XXI. The effect of parenteral introduction of certain colloidal metals on the count," *Quarterly Journal of Experimental Physiology*, 1932, XXII, pp. 25-32.

"Studies on the Arneth Count, XXII. The liberation of the neutrophils from the leucogenic centres," *Quarterly Journal of Experimental Physiology*, 1932, XXII, pp. 153-58.

By Dr. D. R. Climenko and W. P. Kennedy: "Studies on the Arneth Count, XVIII. The normal count in various mammals," *Quarterly Journal of Experimental Physiology*, 1931, XXI, pp. 253-64.

### **Department of Poultry.**

By Helen I. Milne: "Profits from eggs," *Farm and Ranch Review*, January, 1932.

"Farm flock improvement," *Farm and Ranch Review*, February, 1932.

"Care and feeding of chicks" (series of two articles), *Canadian Poultry Review*, February and March, 1932.

"Progress in poultry nutrition," *Canada Poultryman*, May, 1932.

"Protein requirements of growing chicks," *Scientific Agriculture*, vol. XII, No. 10, 1932.



### **Department of Soils.**

By Dr. F. A. Wyatt: "Soil drifting and its control," Section No. 1, "Soil types and management in relation to soil-drifting," Circular No. 13, Department of Extension, April, 1932.

By Dr. F. A. Wyatt and Dr. J. D. Newton: "Wooded soils and their management," Bulletin No. 21, University of Alberta, March, 1932.

### **Department of Surgery.**

By Dr. Emerson Smith: "The treatment of ureteral calculi with analysis of two hundred cases," Canadian Medical Association Journal, XXVI, pp. 560-61, 1932.

"Nephrectomy for pyonephrosis in a child of eleven months," Canadian Medical Association Journal, XXVI, pp. 580-82, 1932.

### **Department of Zoology.**

By Dr. William Rowan: "The riddle of migration," pp. 151 and XIV, 2 maps, 9 figs., Williams and Wilkins Co., Baltimore, October, 1931.

"The status of the Dowitchers with a description of a new subspecies from Alberta and Manitoba," Auk, January, 1932, vol. XLIX, pp. 14-35, pls. II and III.

### **Department of Industrial Research.**

By Professor E. Stansfield and others: "Report of committee of enquiry into motor fuel and lubricating oils in Alberta," Legislative Assembly of Alberta, Sessional Paper No. 50, 1931.

By Professor E. Stansfield: "Composition and classification of Canadian coals," Proceedings of the symposium on fuel and coal, McGill University, Montreal, October and November, 1931, pp. 35-72.

By Professor E. Stansfield and K. C. Gilbert: "Determination of the alkali-soluble ulmins in coal," Transactions A.I.M. & M.E., Coal Division, 1931.

"Moisture determination for coal classification," Transactions A.I.M. & M.&E., Coal Division, 1932.

By Professor E. Stansfield and W. H. Cook: "The drying of wheat," National Research Council Report No. 25, p. 104, 1932.

The Twelfth Annual Report of the Research Council of Alberta.

Work of the Fuel Division by Professor E. Stansfield, W. A. Lang, K. C. Gilbert, R. G. Brewer, M. F. Teskey, and H. E. Morris.

Work of the Road Materials Division by Professor K. A. Clark and D. S. Pasternack.

## **THE WIDENING AND DEEPENING OF THE STUDENTS' EDUCATION**

There was a time when the education of the student was confined to a study of the quadrivium and the trivium. It is only a generation

since seven fixed subjects formed the staple intellectual food of the student in Arts in the Scottish university. Knowledge was not so extensive, and the seven subjects provided at least a reasonably adequate foundation. Since those days the situation has greatly changed. For purposes of administration in education, knowledge has been broken up into many discreet sections. These have been separately labelled: and, under the widely elective system which is now in vogue, students may choose, within limits, those parts of knowledge to which they are directed, by their own interest, and in this way they may obtain their education. There will be fairly general agreement that interest is a sound motive in the selection of subjects which may serve to enrich and to discipline the mind: and, to that extent at least, the system is sound. But there are two grave dangers which all who have to do with university education are fully cognisant of. The first is that in the selection of a limited group of subjects, the opportunity is excluded of appreciating the world of knowledge in a unified and fully integrated whole, and of understanding the artificially separated parts which may be selected for study in their natural relationship to that whole. There is the danger of lack of breadth. The second is that in choosing many such separate entities of knowledge the opportunity may not occur, or rather may not be fully seized, of intensive and continuous study in one or two subjects, wherewith to enrich and to exercise the mind. When a subject is finished from the standpoint of university examinations, and a new subject undertaken, there is more than a possibility that the subject is finished indeed in as far as education is concerned. There is the danger of lack of depth.

The Freshman Committee have given consideration to the matter of a course of lectures to all new students of the University, which might be designed to give the student an appreciation of the unity of the world of knowledge, and of the inter-relationship of the so-called parts which are known to university students as subjects. It was felt advisable to present this course to the students in their first university year, in order that they might begin with some appreciation of knowledge as a whole, and might the more readily articulate their own studies to the whole body. It was felt by the committee as well that the President should conduct this course, and give a unity of treatment which might be somewhat more difficult to achieve if several men were to contribute to the course. The experiment will be tried for a year, and the plan may thereafter be modified in the light of this experience that will be gained.

The deepening of the education of the student by means of more intensive and more continued study in a limited number of subjects is of particular importance for the abler students. In the Faculty of Arts and Sciences the abler students select the honours course. It seemed advisable therefore to confine attention for the time being, as far as this problem was concerned, to the honours courses of the

University. The Faculty of Arts and Sciences are now engaged in a study of the honours courses, with a view to giving greater freedom from examinations and class-room routine to honours students, in order that they may devote their time and attention to exhaustive studies of certain fields in their chosen subjects, and undergo at the end of their course a comprehensive examination to test their real grasp of the subjects. They are students of known ability. They have one year more in their degree course than the pass course students. They should therefore be in a position to demonstrate the value of relative freedom in their university education.

It is of the utmost importance that the examination be considered not as the end point, but as a test of the growth of knowledge and consecutive thinking, and as a stimulus to further application. Thought is being given to such modifications of this system as may serve to attain this end.

### FRATERNITIES IN THE UNIVERSITY

When fraternities were first admitted in 1929 a committee was appointed by the Senate to supervise and regulate fraternity life in the university. This committee laid down the conditions that students under the jurisdiction of the Freshman Committee in their first year in the University in the Junior Division be not admitted to fraternities, and that they be pledged only in the second term and that no students who had not scholastic standing (the standing necessary to admit to inter-university athletics) be admitted to fraternities. It has been, and is, the policy of the committee as well that the number of fraternities be strictly limited and that the students in any particular fraternity be drawn from all departments of university life. The representatives of the fraternities keep in touch with the committee and consult them on any important methods of policy. Members of the staff are associated as well with individual fraternities as elder brothers, and are in close relationship with their respective groups of fraternity students.

There are nine fraternities connected with the University—five of men's groups and four of women's groups. The list is given as a footnote to this report. Three of the men's fraternities are chapters of international fraternity organizations, one of a Canadian national organization, and the fifth is not yet affiliated. All of the women's groups are chapters of international organizations. The average size of the group is slightly under twenty-five; there are approximately two hundred students associated with fraternity life on the campus. All but one of the men's groups have fraternity houses, and one of the women's groups has a house. These houses are rented for seven months, or, exceptionally, for the year. It is very improbable that any other basis of arranging for a house will be adopted for many years to come. The houses accommodate six to eleven members, and the other members come together in the house once a week for their



regular meeting. The groups who have no houses meet in university rooms or at the homes of members of the group who live in Edmonton.

The real value of fraternity life should come from the intellectual stimulus which the close association of groups of congenial students may foster. The scholarship level of the members of fraternities is higher than that of the average of university students. The women students ask for an even higher admission standard than that of scholastic standing. Most of the groups have scholarship committees whose duty it is to assist members whose standing may be weak. In the matter of general intellectual activity, the men's groups have been more constructive than the women's. Discussions on some general subject, introduced either by a member or by a guest, are becoming a fairly regular procedure; and the many intellectual interests with which the members are associated find a common focus in such discussions. It is the aim of this committee to encourage this aspect of fraternity life by any means at its disposal.

Where there are fraternity houses, the management is in the hands of a house manager responsible to the executive of the fraternity. They impose their own rules with reference to the internal conduct of the house. In one of the fraternity houses the use of liquor is not permitted; in another only on specific occasions; in the other two the use of liquor is permitted, but not in the entertainment of prospective members. Any infringements of decorum in the use of liquor are penalized by disciplinary action of the fraternity. This is a part of fraternity life where it is necessary that the committee keep in as close touch with the situation as may be possible.

The most difficult question which the committee has faced is that of "rushing." It is clearly understood that freshmen may not become members of fraternities in their freshman year. The pledging of freshmen was permitted, however, in March of their first year and admission to fraternity life would then take place at the beginning of the second year, conditional on a satisfactory scholastic standing in the first year. At the request of all the fraternities the time for pledging for this year has been moved backward to the first two weeks in January, so that the examinations at the end of the session be interfered with as little as possible. The alternative proposal is to pledge only at the beginning of the second year, thus leaving the first year uninterrupted by fraternity activities. The committee will be disposed to advise this second course for trial in another year in order to obtain full information as to the working out of both systems. The important matter is to cause the freshmen as few interruptions as may be in their first year of university life, and to give them and the fraternities time to become acquainted, before any decisions are reached on either side. On the whole, this is a matter which means more to women than to men; and the committee is desirous in this matter to avoid some of the difficulties which have been experienced elsewhere.

The grouping of the students into small and somewhat intimate groups has its disadvantages, and might have its dangers. Fraternity life has not, however, played any part in University politics, and the students realize that it cannot be permitted to do so. The number of the student body is now so large that groupings are inevitable. It is probable that very natural groupings are taking place through the fraternity organization. The committee would desire further trial of the system on the present restricted basis before any change of policy or widening of basis might be contemplated.

List of fraternities:

Women's—Pi Beta Phi,  
Kappa Alpha Theta,  
Delta Delta Delta,  
Delta Gamma.

Men's—Phi Delta Theta,  
Pi Epsilon,  
Zeta Psi,  
Phi Kappa Pi,  
Delta Kappa Epsilon.

## THE FUNCTION OF THE UNIVERSITIES IN WESTERN CANADA

At a time of financial depression, when the western governments are making heavy reductions in their grants to the universities, it is well to recapitulate what the universities have stood for in Western Canada, and what they must continue to stand for. There is always a danger that too great sacrifices may be made in the realms which are of the spirit. It is essential that we retain sufficient poise to maintain a sense of proportion, and a sense of values, in times such as these.

The prairie provinces of Canada established universities early in the history of the respective provinces, while in British Columbia affiliations took place with McGill University of two institutions which proved to be the forerunners of the University of British Columbia. There is now a quarter of a century of experience of university life in the provinces of Western Canada, and in Manitoba of twenty years more. It is a long enough period to justify a resume of the value of the university contributions to Western Canadian life.

The underlying motive in establishing universities in the young provinces was twofold. There was first the desire to give the opportunities to all young men and women to equip themselves intellectually, without too heavy financial sacrifice, for positions in the professions to which their ability justly entitled them. Without universities in the respective provinces, only a very few, and these among the well-to-do, would have had the chance to enter the professions. As it is, few have been debarred by financial inability to go forward

to higher learning, if the desire and the equipment showed themselves. Many have now taken their place with distinction in Western Canadian life, and some in national or even wider spheres. They have suffered no handicap in that they have chosen the universities of their own provinces; in certain respects they have gained greatly by so doing. Their mental development has taken place in an atmosphere which, while not parochial or provincial, has not been alien to the conditions and surroundings of their early life. It is the business of the universities to see to it—and the universities in Western Canada have not failed in this essential—that the staff has within itself a universality of training and experience which is the mark of the university wherever it may be placed.

The founders of our western universities had a further conception of the function which the institutions would fulfill. They recognized the fact that the university is the main factor in the upbuilding and safeguarding of our modern civilization and that without it a province would be insecure. For a university penetrates beyond the material into the realm of inner values, and builds on these values. These are the intangibles which defy accurate estimates; but no one who knows the western provinces can deny that the universities have been at the very centre of their life and thinking. Not only have they created attitudes and intellectual interest among thousands who now, as graduates, are in a position of influence in their communities; not only have they safeguarded the mechanics of civilization by maintaining the standards of entrance to the professions which are significant in our modern civilization; but, even more, they have quietly but insistently emphasized the permanent values in a time and in an environment where the material might have been given undue prominence. To some this may appear to be a somewhat elusive contribution; but there is no room for question that the relative stability in appreciation of values which the people of the West have shown through a quarter of a century of unsurpassed material progress has been in large part due to the contributions which have been made by the universities of the western provinces. This they have been able to accomplish while at the same time assisting, through the research work of the scientific staffs, in promoting material progress along the soundest lines.

It is sometimes argued that a university should maintain itself from fees. That argument is based on the assumption that only the student benefits from the institution, and that there are not wider values which come from devotion to the ideal of truth, in scientific research and in the fields of letters and the human sciences. There is no way by which students' fees can meet a major part of the cost of a university, unless there is a system of scholarships so widespread that no able student would be prevented by lack of means from reaching the university. In such scholarships Canada is notably lacking; and for that reason the fees cannot safely be raised beyond



a relatively low level. In the professional courses in particular, even in good times, students find difficulty in carrying through without considerable financial assistance. Universities would fail in their purpose if they barred the door against the student of outstanding ability because of his lack of means. This is a responsibility which must be met in part by the contribution of the state; and in return the state university renders public service in a great variety of ways unconnected altogether with the students who seek an education at the university itself. In extension services to the people of the province in both practical and cultural interests, in expert advice such as only qualified men may give, in insistence on standards of professional life, and, above all, in devotion to the truth and the inner permanent values in life, the university is not for the student alone, but for all the people of the province.

May I be permitted, at the end of a difficult year, and with greater difficulties still before us, to express my deep sense of gratitude for the unfailing support of the Board of Governors, the Senate, and the members of the University staff? In times such as these, a sense of inner loyalty to the University and to all that it stands for is one of our most precious possessions.

ROBT. C. WALLACE,  
President.

# PART II

## Financial Statement

### UNIVERSITY OF ALBERTA

BALANCE SHEET—MARCH 31, 1932

ASSETS		
<b>CAPITAL ACCOUNT:</b>		
Land, Buildings and Plant .....	\$3,798,712.75	
Furnishings and Equipment .....	778,494.02	
Livestock .....	24,345.35	
Bond Discount and Expense .....	337,546.17	
Due from Income Account .....	69,114.30	
		\$5,008,212.59
<b>INCOME ACCOUNT:</b>		
Cash on hand .....	\$ 5,411.15	
Accounts Receivable:		
Sundry debtors .....	\$23,417.52	
University Hospital .....	17,949.05	
		41,366.57
Inventories .....		60,028.37
Unexpired Insurance .....		5,801.67
Deficit March 31, 1931 .....	\$31,947.37	
Add: Adjustment in respect of ac- counts written off for previous fiscal periods .....	4,000.00	
	\$35,947.37	
Less: Surplus for year ended March 31, 1932 .....	434.72	
		\$ 35,512.65
		\$ 148,120.41
<b>TRUST ACCOUNT:</b>		
Government Bonds .....	\$ 546,215.00	
Mortgage on St. Joseph's College .....	50,000.00	
Loans Receivable .....	2,628.55	
Imperial Bank of Canada Trust Account .....	43,535.63	
Cash on Hand .....	354.11	
		\$ 642,733.29
		\$5,799,066.29
LIABILITIES		
<b>CAPITAL ACCOUNT:</b>		
Debenture Debt 6½%, July 1, 1936 .....	\$ 450,000.00	
Province of Alberta .....	4,444,253.96	
Accounts Payable .....	1,106.59	
Library Fees Unexpended .....	7,792.12	
Capital Surplus .....	105,059.92	
		\$5,008,212.59
<b>INCOME ACCOUNT:</b>		
Imperial Bank of Canada Overdraft .....	\$ 40,321.91	
Accounts Payable .....	33,599.20	
Due to Capital .....	69,114.30	
Deferred Revenue .....	5,085.00	
		\$ 148,120.41
<b>TRUST ACCOUNT:</b>		
Rockefeller Foundation .....	\$ 500,000.00	
Sundry Trusts .....	142,733.29	
		\$ 642,733.29
		\$5,799,066.29

Edmonton, August 2, 1932.

I have audited the books and accounts of the University of Alberta for the year ended March 31, 1932, and the above Balance Sheet and accompanying Revenue and Expenditure Statement are in accordance therewith. Capital Assets are shown at book value and accounts receivable are subject to realization.

Subject to the foregoing, I certify that, in my opinion, the above Balance Sheet is properly drawn up so as to exhibit the financial position of the University as at March 31, 1932, and the annexed Revenue and Expenditure Statement sets forth the result of operations for the year ended at that date.

JAMES C. THOMPSON, C.A.,

Provincial Auditor.



# UNIVERSITY OF ALBERTA

## STATEMENT OF REVENUE AND EXPENDITURE FOR THE YEAR ENDED MARCH 31, 1932

### REVENUE

Province of Alberta:			
Grant .....	\$588,388.00		
Debt charges .....	281,113.61		
		\$	869,501.61
Rockefeller Foundation .....			25,000.00
Fees .....			152,335.16
Rentals .....			20,030.90
Dining Room .....			7,398.97
Works Department .....			5,525.51
Bookstore and Post Office .....			4,941.46
Printing Department .....			11,214.22
			<u>\$1,095,947.83</u>

### EXPENDITURE

Salaries:			
Total salaries and wages .....	\$707,366.99		
Less: Charged to Departments....	295,740.99		
		\$	411,626.00
Debenture Interest and Charges .....			281,113.61
Agriculture .....			131,420.67
Laboratories .....			64,385.17
Light, Heat and Power .....			34,061.04
Maintenance and Repairs .....			46,727.37
Department of Extension .....			38,083.21
Insurance .....			6,865.90
Bank Interest .....			98.30
Calendars and Press Bulletins, etc. ....			6,189.88
Teachers' Courses .....			4,927.90
Summer School .....			4,515.00
Printing and Stationery .....			4,207.04
Telephones and Telegrams .....			2,216.56
Sundries .....			2,947.35
Library .....			5,050.62
Special Clinical Services .....			25,000.00
Travelling Expenses .....			2,581.17
Upkeep of Cars .....			1,128.34
Postage and Excise .....			1,025.54
Physical Education .....			1,494.62
Office Machines and Equipment .....			253.68
Office Machines, Inspection and Repairs ..			251.50
Scholarships and Medals .....			217.50
Pensions .....			19,125.14
			<u>\$1,095,513.11</u>
Net Surplus for the year .....		\$	<u>434.72</u>



